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CYSTIC TUMORS OF THE JAW.

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READ AT THE ANNUAL MEETING OF THE MASSACHUSETTS MEDICAL SOCIETY,
May 29, 1866.

LIBRADY 2 5-9862

THE appearance of these tumors is generally very formidable, and the practice, for the most part, when the whole substance of the bone is dilated into a mere sac, almost entirely deprived of osseous substance, has been, until very recently, to remove the portion of the jaw involved by the tumor. When the tumor has grown simply at the expense of the outer table of the bone, either of the upper or lower jaw, without involving its whole substance, it has been customary to explore the cyst and remove a portion of it, causing inflammation and obliteration of the cavity, as in the case of cysts occurring in soft parts. Dupuytren, in his collected articles on Diseases of the Bones, has attached more importance to this question than any other writer, and illustrates by cases the effect of exposing the tumor by external dissection, removing a portion of the sac, and, by applications, effecting its obliteration. Professor March, of Albany, has written a valuable paper on this subject, in the "Transactions of the New York State Medical Society." Professor Gross and others have suggested the idea that in large cysts, which involve the whole bone, and which formerly were known under the name of "spina ventosa," the treatment should be the same. In one of the cases cited by the former gentleman, the extirpation of the bone was finally found necessary after this plan had been tried.

As to the causes of these diseases, they are various. In the jaw,

they probably arise, in most instances, from irritation at the roots of the teeth; in the long bones, the head of the tibia for instance, from blows.

In 1862, I published, in the Boston Medical and Surgical Journal, a case occurring in an elderly woman of a cyst which involved the ascending portion and condyles of the jaw, and which I removed; not thinking it safe, in a person of her age, when the disorganization of the jaw seemed to be so complete, to run the risk of an experimental mode of treatment. Since that time, I have had an opportunity of trying the conservative plan of treatment in two instances, which I propose shortly to relate.

Notwithstanding the principle which has been suggested or hinted at, for the treatment of large cystic tumors of the jaw, none of the writers on the subject have presented cases—where complete destruction of the bone has taken place, leaving nothing but a delicate cyst which have been successfully treated by the method referred to. Dupuytren, in his work on "Diseases of the Bones," gives several cases treated without excision; some of them, however, unsuccessfully. M. Nélaton has also written upon the subject, referring for cases to the work of Dupuytren, and advising the puncture of the cyst and the stuffing of its cavity with lint. Mr. Erichsen says, "when the cysts are so large that they have destroyed the integrity of the bone, or when they are associated with a large quantity of fibrous tissue, so as to constitute true fibro-cystic tumors, excision of the diseased bone must be practised." Mr. Stanley, in his "Treatise on the Diseases of the Bones," describes perfectly the affection, but does not allude to any other operation than the "removal of the tumor and of the portion of the bone from which it has arisen."

In the two following cases, the treatment consisted in the puncture of the sac within the mouth, evacuating its contents, and at the same time obliterating its cavity by crushing in its walls; and lastly, in keeping up, by injections, &c., a sufficient degree of irritation to favor the deposition of new bone. The comparative mildness of this mode of treatment, and the excellent character of the results

combine to award the preference for this operation over excision, or even the large external incision adopted by Dupuytren.

Cystic Tumor of the Lower Jaw.

Case I.—A young woman, æt. 25, with light hair, blue eyes, and delicate skin, applied to me, in the spring of 1862, on account of a large tumor involving the whole right side of the jaw above its angle. The tumor was of a globular shape, extended back under the lobe of the ear, forwards so as to encroach upon the cavity of the mouth, and upwards so as to press upon and somewhat to overlap the zygoma. The external surface of the tumor was smooth and shining, slightly edematous, and she suffered somewhat from its pressure upon the surrounding organs. It had commenced, some years before, by a swelling at the root of the wisdom tooth of the right side, and the inconvenience caused by its pressure had become so great as to lead her to take measures for its removal.

Upon consultation, it was decided that a portion of the jaw would probably require removal, the tumor having been first exposed by an incision made inside of the mouth, to verify its character.

The following operation was performed, under the influence of ether. An incision was made in the most prominent part of the tumor in the mouth, upon which a large quantity of glairy fluid escaped. Upon passing the finger into the opening, it was found that the whole jaw, at this point, with the articulating and coronoid processes, was expanded into a mere shell, at some parts as thin as parchment, and destitute of osseous substance. It was without solid contents. Under these circumstances, and considering the good health and youth of the patient, it was determined to make the attempt to save the jaw. A portion was therefore removed from the sac, and with the fingers the sides of the cavity were made to collapse, so as to come in contact with each other. In order to excite still further irritation, a

bit of cotton cloth was forced into the interior, and the end left projecting into the mouth. A moderate degree of irritation followed, and in a day or two the pledget was removed, suppuration having commenced in the sac. The aperture was dilated from time to time by the introduction either of the finger or of a bougie, and the sac injected with tincture of iodine. In two or three weeks she left the Hospital, with the tumor reduced to about half its original size. From that time until the present, she has occasionally visited me at my house, and by keeping the external opening free, and occasionally irritating the interior of the sac, a solid mass of bone has been deposited anew, and the jaw has resumed somewhat of its original shape. The sac is in the way of becoming entirely obliterated.

In November, 1863, I again saw the patient, who came to consult me, not about herself, but about a friend. All signs of the tumor were gone, and the jaw had regained almost its natural shape; but a small aperture still existed at the site of the former opening into the mouth, from which a glairy fluid was occasionally discharged. She was quite well, and all the functions of the jaw were perfectly performed.

Subsequently, she applied to me with a similar tumor, but of a much smaller size, which had appeared anterior to the site of the first one. It was treated in a similar manner, with a similar result.

Case II.—May 23d, 1863, Dr. Bennett of Uxbridge, Mass., brought me as a patient, a gentleman 56 years of age, with a large tumor on the right side of the face and parotid region. He was of a pale and yellowish color, much emaciated, and his aspect at first struck me as that of a person suffering from malignant disease. He said that, five years before, while eating, he had the sensation of something giving way in the neighborhood of the ascending ramus of the lower jaw. Shortly after, a tumor appeared in that region, which had slowly increased to its present size. Before making an examination, it was

not easy to say whether the tumor was connected with the parotid gland or with the jaw. From the first commencement of the tumor to the present time, mastication, and for a good part of the time, deglutition, had been much interfered with. The tumor had been examined by many physicians of experience, and by most of them considered as a parotid tumor, and, as the patient inferred, although he was not directly told so, of a malignant character. It extended backwards into the parotid region, upwards upon the face, and inwards, so as to occupy the right half of the palate, and was covered with a highly irritable mucous membrane, somewhat ædematous, and similar to what we often see investing malignant tumors in the mouth which have made their way through from the neck. During an examination, the patient said there had been of late a slight discharge of fluid into the mouth, and on making a careful inspection, a minute aperture was detected, at the point where the last molar tooth had been removed.

On introducing a probe at this point, a jet of serum, mixed with flakes of lymph, was projected to a considerable distance. I immediately enlarged the opening with the knife, so that I could introduce the finger. This was a matter of some difficulty, however, as the patient's jaws had been for a long time nearly closed in consequence of the disease. The finger penetrated into a large sac extending far out of reach, and on investigation it soon became evident that the whole tumor was formed by the expansion of the jaw from the development within it of an immense cyst. On withdrawing the finger, a barrier of bone was felt extending across the jaw, and behind it, under the first molar tooth, another smaller sac was discovered.

I now decided to treat this case in a similar manner to the preceding one. An oblong piece of about an inch in length and half an inch in width was removed by scissors, from the wall of the cyst, and, with a finger of one hand in the mouth, and a finger of the other on the outside of the face, the sides of the cyst were broken down, giving way under the pressure like parchment, with a crepitat-

ing noise. The projection of the tumor on the face, as well as within the mouth, became in a great measure effaced. There was a slight but unimportant effusion of blood. The patient returned home under the charge of his physician, with the intention of pursuing pretty much the same course as was adopted in the former instance. On account of his age, and the debility caused by the want of proper nourishment, and owing to the difficulty of mastication, he was ordered tonics and a nutritious diet.

About four weeks later, I again saw him. Everything had gone on well. The tumor was not more than a fourth as large as formerly, and bone had begun to be deposited in the walls of the sac. His health was wonderfully improved, and his complexion had assumed a healthy hue.

Dec. 8th, 1863.—I saw him for the third time, so altered for the better as scarcely to be recognized as the same person. The jaw externally had resumed its natural shape, and, on examination with the finger, its distinctive anatomical marks and processes could be felt. On the inside, where the incision had been made, a deep sulcus was observed, lined with mucous membrane, into which a probe could be passed into the ascending ramus. There was no discharge to be detected, and the power of mastication was as good as ever. The only trouble he experienced was from the lodgment of food in this cavity.

Three months later, he was seen with the jaw in a perfectly healthy condition, having all its functions, and the only change from the normal state was perhaps a somewhat more solid and thickened condition than natural, with a sulcus existing at the back part, where the tumor had originated.

In 1866, he made me a visit, for the purpose of showing the complete success of the operation.

Cystic Tumor of the Upper Jaw.

Case III.—A young lady, æt. 16, of English parentage, was brought to me in May, 1865, on account of a tumor which had been developing for the last three years, in the alveolus of the right upper jaw, just above the canine and bicuspid teeth. Three years before, the nerve of the canine tooth had been destroyed by arsenic, and the carious cavity filled with gold, the first bicuspid also being filled at the same time. Irritation soon commenced at the roots of these teeth, and gradually, and almost imperceptibly, a swelling appeared there. A month before she came to me, this tumor opened at its most dependent part, discharging a glairy fluid, which continued to exude until I saw the case.

The aperture admitted a small probe, which penetrated into a deep, smooth cavity. With the finger, the tumor from below appeared firm; but, when pressed upon under the gum, a degree of elasticity was distinguished.

I informed the parents of the young lady that the disease was a cystic tumor of the bone, and advised an operation. This was assented to. The patient was etherized, and a cut made into the tumor. The mucous membrane was then dissected up from its surface, so as to expose so much of the bony sac as would admit of a free opening being made into it, and the portion of bone was removed with scissors. The finger could now be passed freely into the cavity, which was quite smooth and entirely lined with membrane; it was not penetrated by the roots of any of the adjacent teeth. The cavity was stuffed with lint, in order to excite inflammatory action, for the purpose of obliterating the sac.

The operation had all the effect that could have been desired. In the course of a couple of months, granulations filled up the cavity, entirely obliterating it. She was completely relieved of the disease.

One or two other cases of cysts in the upper jaw I have treated in the same way, with a similar result.









